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Two new species of *Opuntia*

BERNARD MACKENSEN

From the writer's studies of Texas cacti, extending over several years, he has been able to ascertain that there are still a number of undescribed species and varieties among the numerous Texas representatives of that interesting family. It may seem strange that a field so often tramped over by botanical collectors should still yield a number of new though comparatively common forms, especially when these belong largely to the conspicuous *opuntias*. The explanation of this fact is suggested by the writer's own experience in recognizing and differentiating new species and varieties. It was only after keeping the native *opuntias*, growing all about him, under critical observation for one or more years, and making careful notes, that the writer had revealed to him the presence of undescribed forms. In one case it was not until the maturing of the fruit, which is very characteristic, that the writer was able to make out a clear case of a new species. The transient collector would probably have confounded this with some other species, unless he had perchance visited the locality while the plants were in fruit.

Among the new forms mentioned are two which the writer has characterized as follows:

***Opuntia leptocarpa* sp. nov.**

Plants with somewhat fleshy, terete, or sometimes thick-tuberos, roots: stems mostly ascending, rarely 5 dm. high; joints thin, obovate to oval and elliptic, somewhat glaucous while young, deep green when older, or paler in age, mostly 1 to 2 dm. but sometimes 2.5 dm. long, with subulate leaves 5 to 8 (or sometimes 10) mm. in length: areoles remote, rather small, filled with reddish brown bristles and pale wool when young, the bristles 1 to 7 mm. long and growing dirty brown with age, the lower areoles usually naked, the upper bearing 1 to 4 or sometimes 5 unequal spines, or on some joints mostly spineless; spines whitish, light brown, or mottled, slender, 1 to 3 cm. long or sometimes longer, flattened or nearly terete, twisted, spreading, or sometimes the lowest spine of an areole much reflexed: flowers yellow with a pale reddish

brown (or sometimes darker) center, about 7 cm. broad and 8 to 10 cm. long; petals 4 cm. long, obovate, with a large cusp; stigma white, 6- to 8-lobed, about equaling the stamens: fruit elongated (2.5 to 3.5 cm. thick, 5 to 9 cm. long, or sometimes longer), consisting of an elliptic body, with a narrow (often funnellform) umbilicus and a more or less stipiform base, which is sometimes equal in length to the body but usually shorter, the fruit in ripening becoming purplish throughout and finally crimson externally, the base becoming colored tardily, the taste nauseous: seeds suborbicular, nearly or fully 4 mm. in diameter, when dry gray with a buff margin.

The plant blooms in April and May and produces an abundance of fruit, which ripens in August and September. The fruit is sometimes proliferous.

This species is intermediate between the groups represented by *Opuntia macrorhiza* and *O. Lindheimeri*, respectively. It differs from both in a large proportion of the points covered by the description, so that it is necessary to consider it a distinct species. The slenderness of the fruit is very characteristic, hence the specific name.

The description was drawn from plants growing in their native habitat at San Antonio, Texas, and here, too, the type material was collected in 1910. The type is *no. 618292* in the U. S. National Herbarium.

***Opuntia Roseana* sp. nov.**

Plants with somewhat fleshy terete and thick-tuberous roots: stems commonly several, mostly erect or ascending, sometimes attaining a height of 3 dm., often consisting of an unbranched row of joints; joints mostly relatively thick, obovate to orbicular, 4 to 13 cm. long, often with a shriveled appearance; leaves stout, 2 to 3 mm. broad at base, 4 to 7 mm. long; areoles (often on a decided prominence) filled with pale yellow or whitish bristles 1 to 6 mm. long, only the areoles about the margin of the upper half of the joint armed, or often the entire joint spineless; spines usually white, some joints with a few amber or brownish ones, slender, very short to 2.5 cm. long (or in rare cases 3 to 5 cm. long and very slender), twisted, nearly terete, 1 to 2 or sometimes 3 to an areole, the lower one often reflexed, the others usually erect or spreading: flowers pale yellow with a claret center, about 6 cm. broad and long; stigma white, 5- or 6-lobed, equaling the stamens: fruit obovate-oblong to elliptic-oblong, often narrowly so, 1.5 to 2 cm. wide, 3.5 to 4.5 cm. long, with a crateriform umbilicus, a dull

pink to rose purple outer layer, and a nearly colorless, pleasant-tasted pulp: seeds suborbicular, relatively thick (4 mm. long, 2.5 mm. thick), dirty yellow, with grayish areas on the flat sides, the margin thin and whitish at the raphe.

Flowering in May, the fruit ripening in August and September and not proliferous.

The flowers and fruit of this species show a close relationship to *Opuntia macrorhiza*, but the decided differences in habit, spines, and bristles, and the numerous minor differences, are sufficient justification for regarding it as a distinct species.

The description was drawn from plants growing in their native habitat at Kerrville, Texas, in May, 1910. At the same time a number of plants were transported to San Antonio, Texas, and replanted, and from these the type material was chosen in October of the same year. The type is *no. 618290* in the U. S. National Herbarium.

The species is named in honor of Dr. J. N. Rose of the United States National Museum.

SAN ANTONIO, TEXAS.